



City of Maple Valley
NPDES Phase II
Stormwater Management
Program Plan (SWMP)

March 2021

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Acronyms and Abbreviations

AKART	All Known, Available, and Reasonable Treatment
BMP	Best Management Practices
CESCL	Certified Erosion and Sediment Control Lead
CMMS	Computerized Maintenance Management System
DOE	Department of Ecology
EPA	Environmental Protection Agency
GIS	Geographic Information System
IDDE	Illicit Discharge Detection and Elimination
LID	Low Impact Development
MEP	Maximum Extent Practical
MS4	Municipal Separate Storm Sewer System
MVMC	Maple Valley Municipal Code
NPDES	National Pollutant Discharge Elimination System
OGD	Our Green/Duwamish
O&M	Operations and Maintenance
STORM	Stormwater Outreach for Regional Municipalities
SWMP	Stormwater Management Program
SWPPP	Surface Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load

1. Introduction

1.1 Overview and Background

The National Pollutant Discharge Elimination System (NPDES) permit program is a requirement of the federal Clean Water Act, which is intended to protect the water quality and restore waters for “fishable, swimmable” uses. The federal Environmental Protection Agency (EPA) has delegated permit authority to state environmental agencies, which, for Washington State is the State of Washington Department of Ecology (DOE).

Municipalities with a population of more than 100,000 have been designated as Phase I communities and must comply with Ecology’s Phase I NPDES Municipal Stormwater Permit as operators of large municipal separate storm sewer systems (MS4s). As a city with less than 100,000 population, the City of Maple Valley has been designated as a Phase II community and must comply with Ecology’s Western Washington Phase II NPDES Municipal Stormwater Permit as an operator of a small MS4. More than 80 small and medium cities and urban portions of 5 counties in western Washington, must comply with the Phase II Permit requirements.

The Permit authorizes the discharge of stormwater runoff from municipal drainage systems into the state’s surface waters (e.g. streams, lakes, wetlands) and groundwater as long as municipalities implement Permit-specific “best management practices” (BMPs). These BMPs are intended to protect water quality and reduce the discharge of non-point source pollutants to the “maximum extent practicable” (MEP). In addition, BMPs are intended to meet the state AKART (all known, available, and reasonable methods of prevention, control, and treatment) for waste discharge requirements.

The BMPs specified in the Permit are collectively referred to as the Stormwater Management Program (SWMP) and grouped under the following elements:

- Stormwater Planning
- Public Education and Outreach
- Public Involvement and Participation
- MS4 Mapping and Documentation
- Illicit Discharge Detection and Elimination
- Controlling Runoff from New Development, Redevelopment, and Construction Sites
- Operations and Maintenance
- Source Control Program for Existing Development

As a programmatic permit, the components work together to ensure protection of water quality in our streams, lakes, wetlands, and groundwater. Permit conditions are phased in over the 5-year Permit term (2019-2024). The Permit requires the City to report annually (March 31st of each year) on the progress of the program in the prior year. The Permit also requires submittal of documentation that describes proposed SWMP activities for the coming year. This document acts as the SWMP Plan that describes activities completed in 2020 and planned activities in 2021.

1.2 Permit Implementation Timeline in 2020 and 2021

On August 1, 2019, a new permit was issued for 2019-2024. The Permit requirements are phased in over the course of the 5-year Permit term. The new and/or increased permit requirements in 2020 are:

Stormwater Planning:

August 1, 2020

- Permittee shall convene an inter-disciplinary team to inform and assist in the development, progress, and influence of this program.

Public Education and Outreach:

July 1, 2020

- Permittee shall conduct a new evaluation of the effectiveness of an ongoing behavior change campaign. Permittees shall document lessons learned and recommendations. The Permittee may forgo this evaluation if they choose to develop a strategy and schedule for a new target audience and BMP behavior change campaign by February 1, 2021.

MS4 Mapping and Documentation:

January 1, 2020

- Permittee shall begin to collect size and material for all known MS4 outfalls during normal course of business and update records.

The new and/or increased permit requirements in 2021 are:

Stormwater Management Program:

March 31, 2021

- The SWMP shall include coordination mechanisms among departments within each jurisdiction to eliminate barriers to compliance with the terms of the Permit.

Stormwater Planning:

March 31, 2021

- Permittee shall respond to the series of Stormwater Planning Annual Report questions to describe how anticipated stormwater impacts on water quality were addressed, if at all, during the 2013-2019 permit term in updates to the Comprehensive Plan and in other locally initiated or state-mandated, long-range land use plans that are used to accommodate growth or transportation.

Public Education and Outreach:

February 1, 2021

- Based on the recommendation from the evaluation of effectiveness of an ongoing behavior change campaign, each Permittee shall follow social marketing practices and methods, similar to community-based social marketing, and develop a campaign that is tailored to the community, including development of a program evaluation plan.

April 1, 2021

- Implement the behavior change strategy developed.

MS4 Mapping and Documentation:

August 1, 2021

- The required format for mapping is electronic with fully described mapping standards.

The City of Maple Valley's implementation or planned implementation of these permit requirements is addressed within this Plan.

2020 was a unique and challenging year for all departments within the City as we responded to the COVID-19 pandemic. Most of our team was not able to work from the office for the majority of the year, meetings were limited and meeting formats were changed, protocols for the safety of our inspection and maintenance crews has to be addressed and continually updated, and our normal outlets for education and outreach through community events were cancelled. Despite these challenges, the City was able to meet all Permit related requirements in 2020 and expects to continue to adapt in 2021 in order to have a productive year.



Lake Wilderness

2. Stormwater Planning S5.C.1

This section describes Permit requirements related to Stormwater Planning. The Stormwater Planning program element of the Permit is intended to inform and assist in the development of policies and strategies as water quality management tools to protect receiving waters. This is a new element added to the 2019-2024 Permit. This section lists the current and continuing programs and activities that met Permit requirements in 2020, and identifies the planned activities recommended for continued compliance with the current Permit in 2021.

2.1 Permit Requirements

Section S5.C.1 of the 2019-2024 Phase II Permit requires the City to:

- Convene an inter-disciplinary team to inform and assist in the development, progress, and influence of this program.
 - ✓ By **August 1, 2020**, provide a written description of internal coordination mechanisms.
- Report on how stormwater management needs and receiving water protection/improvement inform the long-range planning update process and influence policies and implementation strategies
 - ✓ **On or before March 31, 2021**, complete report questions to describe how anticipated stormwater impacts on water quality were addressed in the 2013-2019 permit term in updates to the Comprehensive Plan.
 - ✓ On or before **January 1, 2023** the same questions will be answered for the 2019-2024 permit term.
- Assess and report any newly identified administrative or regulatory barriers to implementation of low impact development (LID) principles or LID BMPs. Report on measures to address barriers since local codes were adopted in 2016, and mechanisms to encourage or require LID implementation.
 - ✓ **Annually** report on barriers and measures to address them.
- Implement stormwater management action planning (SMAP):
 - ✓ Review existing information to assess local receiving water bodies and contributing basin conditions. By **March, 31, 2022** submit a watershed inventory.
 - ✓ By **June 30, 2022** develop a prioritization method and process to identify and rank receiving water bodies for stormwater facility retrofits and management actions.
 - ✓ By **March 31, 2023**, develop a Stormwater Management Action Plan (SMAP) for at least one high priority catchment area.

2.2 2020 Activities

In 2020, the City took the following steps towards meeting Stormwater Planning requirements:

- The City continued to work with our interdisciplinary team to improve processes and implementation of this program. This interdisciplinary team includes the following personnel within City departments:
 - Surface Water Management group

- Public Works Maintenance
 - Planning and Community Development
 - Construction Inspection
 - Building Official/Code Enforcement
 - GIS/IT
 - City Manager
 - Maple Valley Police Department
 - Puget Sound Fire Authority
- ✓ A description of the coordination mechanisms was attached to the 2020 Annual Report. The City answered additional questions relating to Stormwater Planning coordination in the 2020 Annual Report.
- The City continued to work with the Community Development Department to incorporate stormwater management needs and receiving water protection and improvement in the long-range planning update process and influence policies and implementation strategies.
 - ✓ A series of questions relating to how long range plans addressed stormwater issues in the previous permit cycle (2013-2019) were answer in the 2020 annual report.
- The City continued to work with City Planners and the Development Engineer to identify any existing administrative or regulatory barriers to implementation of LID principles or LID BMPs.
 - ✓ None were identified in 2020. If any are identified in 2021, they will be reported in the 2021 Annual Report and 2022 SWMP.
- The City continued to work toward future SMAP requirements in the following way:
 - ✓ Worked with Our Green/Duwamish (OGD) to continue the development of a watershed wide mapping tool to inform regional decision making related to stormwater management. A proof of concept tool developed by The Nature Conservancy and Geosyntec with funding from OGD partners was demonstrated in November of 2020. The tool should be ready for use in 2021.
 - ✓ The City delineated and mapped within our GIS system stormwater sub basins that will be used for the SMAP prioritization.

2.3 2021 Planned Activities

In 2021, the City will take the following steps towards meeting Stormwater Planning requirements:

- The City will continue to work with our interdisciplinary team to improve processes and implementation of this program.
- The City will work with the Community Development Department to continue to incorporate stormwater management needs and receiving water protection and improvement in the long-range planning update process and influence policies and implementation strategies.
- The City will continue to work with City Planners and the Development Engineer to identify any existing administrative or regulatory barriers to implementation of LID principles or LID BMPs.
 - ✓ If any are identified in 2021, they will be reported in the 2021 Annual Report and 2022 SWMP.
- In 2021 the City will work toward future SMAP requirements in the following way:
 - ✓ Work with OGD to continue the development of a watershed wide mapping tool to inform regional decision making related to stormwater management. This tool will help

with the watershed inventory, receiving water assessment, and receiving water prioritization requirements of SMAP.

- ✓ The City plans to hire a consultant to support the development of the SMAP Plan alongside an update of the Stormwater Comprehensive Plan at the end of 2021.



Our Green/Duwamish Implementation Plan Cover

3. Public Education and Outreach S5.C.2

This section describes Permit requirements related to Public Education and Outreach. The Public Education and Outreach element of the Permit is intended to build general awareness about methods to address and reduce impacts from stormwater runoff, effect behavior change to eliminate practices that contribute to adverse stormwater impacts, and create opportunities for community engagement. This section lists the current and continuing programs and activities that met Permit requirements in 2020, and identifies the planned activities recommended for continued compliance with the current Permit in 2021.

3.1 Permit Requirements

Section S5.C.2 of the 2019-2024 Phase II Permit requires the City to:

- Implement an education and outreach program for the area served by the MS4. The program shall be based on local water quality information and target audience characteristics to identify high priority target audiences, subject areas, and/or BMPs. Based on the target audience's demographic, the Permittee shall consider delivering its selected messages in language(s) other than English, as appropriate to the target audience.
 - ✓ **Annually** select a minimum of one target audience and one subject area and provide subject area information to the target audience on an ongoing or strategic schedule
 - Target audience 1: General public or businesses
 - Subject areas:
 - General impacts of stormwater on surface waters, including impacts from impervious surfaces.
 - LID principles and BMPs
 - Target audience 2: Engineers, contractors, developers, or land use planners
 - Subject areas:
 - Technical standards for stormwater site and erosion control plans.
 - LID principles and BMPs
 - Stormwater treatment and flow control BMPs/facilities
 - ✓ To affect behavior change, **annually** select, at a minimum, one target audience and one BMP.
 - Target audiences: residents, landscapers, property managers/owners, developers, school age children, or businesses.
 - BMPs
 - Use and storage of: pesticides, fertilizers, and/or other household chemicals
 - Use and storage of: automotive chemicals, hazardous cleaning supplies, carwash soaps, and/or other hazardous materials
 - Prevention of illicit discharges
 - Yard care techniques protective of water quality.
 - Carpet cleaning

- Repair and maintenance BMPs for: vehicles, equipment, and/or home/buildings
- Pet waste management and disposal
- LID principles and BMPs
- Stormwater facility maintenance, including LID facilities
- Dumpster and trash compactor maintenance
- Litter and debris prevention
- Sediment and erosion control
- Audience specific source control BMPs
- Locally-important, municipal stormwater-related subject area
- ✓ By **July 1, 2020**, conduct a new evaluation of the effectiveness of an ongoing behavior change campaign. Document lessons learned and recommendations for which future option to select. The Permittee may forgo this evaluation if they choose to develop a strategy and schedule for a new target audience and BMP behavior change campaign by February 1, 2021.
- ✓ By **February 1, 2021**, follow social marketing practices and methods, similar to community-based social marketing, and develop a campaign that is tailored to the community, including development of a program evaluation plan. The Permittee shall:
 - Develop a strategy and schedule to more effectively implement the existing campaign; or
 - Develop a strategy and schedule to expand the existing campaign to a new target audience or BMPs; or
 - Develop a strategy and schedule for a new target audience and BMP behavior change campaign.
- ✓ By **April 1, 2021**, begin to implement the strategy developed
- ✓ By **March 31, 2024**, evaluate and report on:
 - The changes in understanding and adoption of targeted behaviors resulting from the implementation of the strategy; and
 - Any planned or recommended changes to the campaign in order to be more effective; describe the strategies and process to achieve the results.
- Provide and advertise stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities or events planned and organized within the community, such as: stream teams, storm drain marking, volunteer monitoring, riparian plantings, and education activities.

3.2 2020 Activities

The City currently has an active public education and outreach program that uses a variety of approaches to inform the community about stormwater-related pollution prevention activities. The COVID-19 pandemic impacted some of the typical programs and information delivery methods used in previous years, such as the Car Wash Kit Program, booths at community events, and brochures provided at City Hall. The activities that were continued in 2020 included the following.

- General Awareness and Behavior Change

Business Outreach – King County Hazardous Waste Educational Inspections

The City partnered with King County Hazardous Waste to perform non-regulatory business inspections of all businesses with storefronts in Maple Valley that through their daily business have the potential to impact stormwater. Through their inspections they would provide informational material on hazardous waste disposal, source control BMPs, provided free spill kits, and vouchers for purchase of BMPs.

School Aged Children Education – Nature Vision Stormwater Elementary Education Program

The City continued to contract with Nature Vision to teach educational programs at the three elementary schools within the City of Maple Valley. In 2020, Nature Vision had to shift methods due to the COVID-19 related school closures. Prior to school closures Nature Vision taught two classes to 50 students. During the spring and early summer, Nature Vision provided interactive lesson packets that could be downloaded by teachers or parents to go through with students. These packets included Watersheds (covers water cycles, natural filters, all about groundwater and water supply), Ecosystems (covers, salmon cycles, watershed ecosystems, toadally amphibians, healthy water healthy soil, and healthy water healthy ecosystems), and Invasive Plants, which provided up to four weeks of curriculum for students. We were unable to determine exactly how many students within Maple Valley received education through this digital method, but from April through July, regionally there were 6,323 downloads of packets. These packets will continue to be available to teachers, parents, and students year round.

During the summer, Nature Vision developed additional remote programming with videos accompanying activities written out for teachers, with an additional Nature Vision Q and A call. These videos were provided to registered teachers in fall and winter and provided to a total of 12 classes and 219 students.

Engineer, Contractor and Developer Education - Providing Technical Standards

During pre-application meetings and during planning and construction phases, the City continued to provide technical standards for stormwater site and erosion control plans, basic LID principle information, and stormwater flow control and water quality requirements to engineers, contractors, and developers.

Business Outreach – Mobile and Home Business BMP Information

City Planners distributed information on car washing and maintaining vehicles to businesses who applied for and received business permits for businesses that are operated out of the home and utilize one or multiple vehicles to provide services.

General Public Education

Additional education programs to reach the general public included:

- Maintaining spill and IDDE reporting contact information on the City website.
- Maintaining IDDE information on the website and information on the type of activities that can result in illicit discharge to surface waters.
- Updated links on the City website for information on:
 - LID

- Puget Sound Rain Gardens
- Natural Lawn Care
- Scoop the Poop
- 2016 King County Stormwater Pollution Prevention Manual
- Department of Ecology
- Don't Drip and Drive
- Construction Stormwater General Permits
- Providing information on the website for BMPs including:
 - Carpet cleaning
 - Residential automobile repair and maintenance
 - Landscaping activities and vegetation management
 - Vehicle washing
 - Pet waste
 - Residential gardening and lawn care
- Participating in the Puget Sound Starts Here (PSSH) regional digital and social media awareness ad campaign.

Behavior Change Campaign – Weed and Feed Use Reduction

For the City's Permit required behavior change campaign, the City elected to choose option S5.C.2.a.ii.(c)3 and forego the evaluation of an existing behavior change campaign and instead develop a new campaign in 2021. In 2020, staff attended a 12-week Social Marketing Certificate Course and developed a Social Marketing Implementation Plan focusing on Natural Yard Care and reducing the use of Weed and Feed product. The implementation of this plan will begin in 2021.



Nature Vision Remote Learning Video Filming

➤ Stewardship

Volunteer Water Quality Monitoring Program

Implemented volunteer water quality monitoring under the Lakes Management Program. The City contracted with the King County Department of Natural Resources, Water and Land Resources Division, to monitoring water quality in Lake Lucerne, Pipe Lake, and Lake Wilderness, with the assistance of volunteers. City and King County staff were available to discuss water quality topics with citizens or volunteer groups and to provide information.

Adopt-a-Road

The City provides supplies for our local adopt-a-road roadside trash pickup program for local groups. This program is advertised on the City's website.

SWMP and Annual Report

Posted the City's 2020 Surface Water Management Plan (SWMP) on the front page of the City's website under news and update information with request for public comments for the proposed Plan. Public comments were accepted throughout the implementation of the plan. The most current version of Annual Report and SWMP Plan are also posted on the City's website under Surface Water Management and NPDES Phase II along with previous annual reports and SWMP Plans.

Storm Drain Marking

The City encourages the public to install storm drain markers in their neighborhood. The City has free storm drain markers that can be used by individuals or school/civic groups. In 2020, a Tahoma High School Junior completed marking of 179 storm drains.

Native Tree Planting

On October 21, 2020, the City held a tree and bush planting event at the City's new farmers market location. 13 staff and community members helped to plant over 100 native trees and shrubs where brush was cleared during construction. These plants will provide beautification, improved air quality, and stormwater retention within the site.



Farmers Market Native Tree Planting Event

3.3 2021 Planned Activities

The City's implementation plan for 2021 to achieve the goals and objectives of the Public Education and Outreach Program includes continuing the activities detailed in the previous section, along with the additional activities described below.

➤ General Awareness and Behavior Change

School Aged Children Education – Nature Vision Stormwater Elementary Education Program

The City will work with Nature Vision to continue to provide hybrid video and interactive education opportunities while visitors are not allowed into schools. As schools transition to normal operations, the City will work with Nature Vision to schedule in person courses. Currently 17 remote program classes for grades 2 and 3 are scheduled for the first half of 2021. This will reach approximately 315 students.

Behavior Change Campaign – Weed and Feed Use Reduction

The City has chosen to target the reduction of Weed and Feed product use on residential lawns that drain to the City's lakes. Weed and Feed products are combination fertilizer and herbicide/pesticide products that result in pesticides being spread over the entire lawn and leading to excessive runoff of these pesticides into the storm system. The City plans to target outreach to property owners in areas that drain to lakes and who perform their own landscaping

maintenance. The City will contract with an Education and Outreach consultant to support the implementation of the behavior change campaign. The City and the consultant will prepare an evaluation plan for the effectiveness of the campaign, send outreach materials to the target audience, and hold yard care courses in fall of 2021.

➤ Stewardship

Adopt-a-Drain Program

As part of a regional work group organized by STORM, the City will contract with Hamline University to implement a program that allows residents to adopt a storm drain in their neighborhood – committing to remove trash and debris from the grate on a regular basis – to prevent localized flooding and runoff pollution. The City plans to begin advertising this program in April of 2021.

Storm Drain Marking

Target outreach for the storm drain marking program based on inventory of missing or damaged markers.



Photos from the Active Adopt-a-Drain Program in Minnesota

4. Public Involvement and Participation S5.C.3

This section describes Permit requirements related to Public Involvement and Participation. This section lists the current and continuing programs and activities that met Permit requirements in 2020, and identifies the planned activities recommended for continued compliance with the current Permit in 2021.

4.1 Permit Requirements

Section S5.C.3 of the 2019-2024 Phase II Permit requires the City to:

- Create opportunities for the public, including overburdened communities, to participate in the decision-making processes involving the development, implementation and update of the Permittee's SMAP and SWMP.
- Each Permittee shall post on their website their SWMP Plan and the Annual Report. All other submittals shall be available to the public upon request.
 - ✓ By **May 31st** each year post SWMP Plan and Annual Report on the City's website.

4.2 2020 Activities

The Public Involvement and Participation activities that took place in 2020 included:

- Partnering with the Lake Wilderness Citizen Advisory Committee.
- Posting the City's 2020 SWMP on the front page of the City's website under news and update information with request for public comments for the proposed Plan. Public comments were accepted throughout the implementation of the plan.
- Posting the most current version of Annual Report and SWMP Plan on the City's website under Surface Water Management and NPDES Phase II along with previous Annual Reports and SWMP Plans.

4.3 2021 Planned Activities

The City's implementation plan for 2021 to achieve the goals and objectives of the Public Participation and Involvement Program includes the activities described below.

- Continuing to partner with the Lake Wilderness Citizen Advisory Committee.
- Posting the City's 2021 SWMP on the front page of the City's website under news and update information with request for public comments for the proposed Plan. Public comments will be accepted throughout the implementation of the plan.
- Posting the most current version of Annual Report and SWMP Plan on the City's website under Surface Water Management and NPDES Phase II along with previous annual reports and SWMP Plans.

5. MS4 Mapping and Documentation S5.C.4

This section describes Permit requirements related to MS4 Mapping and Documentation. This section lists the current and continuing programs and activities that met Permit requirements in 2020, and identifies the planned activities recommended for continued compliance with the current Permit in 2021.

5.1 Permit Requirements

Section S5.C.4 of the 2019-2024 Phase II Permit requires the City to perform:

- Ongoing Mapping – map each of the features listed below:
 - Known MS4 outfalls and known MS4 discharge points.
 - Receiving waters, other than groundwater.
 - Stormwater treatment and flow control BMPs/facilities owned or operated by the Permittee.
 - Geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface waters.
 - Tributary conveyances to all known outfalls and discharge points with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems. The following features or attributes (or both) shall be mapped:
 - Tributary conveyance type, material, and size where known.
 - Associated drainage areas.
 - Land use.
 - Connections between the MS4 owned or operated by the Permittee and other municipalities or public entities.
 - All connections to the MS4 authorized or allowed by the Permittee after February 16, 2007.
- New Mapping
 - ✓ By **January 1, 2020**, begin to collect size and material for all known MS4 outfalls during normal course of business and update records.
 - ✓ By **August 1, 2023**, complete mapping of all known connections from the MS4 to a privately owned stormwater system.
 - ✓ By **August 1, 2021**, the required format for mapping is electronic, with fully described mapping standards.
- To the extent consistent with national security laws and directives, each Permittee shall make available to Ecology, upon request, available maps depicting the information required above.
- Upon request, and to the extent appropriate, Permittees shall provide mapping information to federally recognized Indian Tribes, municipalities, and other Permittees.

The City maintains a map of our stormwater and surface water system within ArcGIS Desktop that is updated as part of normal course of business as errors are identified in the field or new features are added. An online map of stormwater features is located here:

Digital or printed maps of any portion of our system are available by request from:

425-413-6646

5.3 2021 Planned Activities

The map displays the following fire zones and their areas:

- Zone 1 (Red):**
 - Cedar River: 0.71 sq. miles
 - Lake Wilderness: 0.54 sq. miles
 - Rock Creek: 0.43 sq. miles
- Zone 2 (Blue):**
 - South Fork Jenkins Creek: 1.18 sq. miles
 - Rock Creek South: 0.13 sq. miles
- Other Zones:**
 - Jenkins Creek: 0.76 sq. miles
 - Cranmar Creek: 1.37 sq. miles
 - Lake Sawyer: 0.73 sq. miles
 - Rock Creek South: 0.03 sq. miles
 - Covington Creek: 0.34 sq. miles

Geographical features and infrastructure include Cedar River, Lake Park, Lake Wilderness, Lake Sawyer, Rock Creek, and the Danville-Georgetown Open Space. Major roads shown are Highway 18, Highway 516, and various local streets like SE 7th St, SE 24th St, SE 26th St, SE 28th St, SE 30th St, SE 32nd St, SE 34th St, SE 36th St, SE 38th St, SE 40th St, SE 42nd St, SE 44th St, SE 46th St, SE 48th St, SE 50th St, SE 52nd St, SE 54th St, SE 56th St, SE 58th St, SE 60th St, SE 62nd St, SE 64th St, SE 66th St, SE 68th St, SE 70th St, SE 72nd St, SE 74th St, SE 76th St, SE 78th St, SE 80th St, SE 82nd St, SE 84th St, SE 86th St, SE 88th St, SE 90th St, SE 92nd St, SE 94th St, SE 96th St, SE 98th St, SE 100th St.

Maple Valley GIS

6. Illicit Discharge Detection and Elimination S.5.C.5

This section describes Permit requirements related to Illicit Discharge Detection and Elimination (IDDE). The IDDE element of the Permit is designed to develop an ongoing program to prevent, detect, characterize, trace, and eliminate illicit connections and illicit discharges into the MS4. This section lists the current and continuing programs and activities that met Permit requirements in 2020, and identifies the planned activities recommended for continued compliance with the current Permit in 2021.

6.1 Permit Requirements

Section S5.C.5 of the 2019-2024 Phase II Permit requires the City to:

- Implement a program with procedures to report and address illicit discharges including spills, and illicit connections, and procedures to address pollutants from an interconnected, adjoining MS4.
- Inform public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of wastes.
- Implement an ordinance that effectively prohibit non-stormwater, illicit discharges into the City's MS4 to the maximum. Evaluate and update existing ordinances, as needed.
- Implement and document a field screening method for illicit discharges and connections, complete screening an average of 12 percent of the stormwater system per year.
 - ✓ **Annually** track total percentage of the MS4 screened beginning **August 1, 2019**.
- Publicize a public hotline number for reporting of spills and other illicit discharges and track all calls and follow-up actions taken.
- Implement an ongoing training program for municipal field staff on identification and reporting procedures.
- Implement an ongoing program designed to address illicit discharges, including spills and illicit connections, which includes procedures for characterizing the nature and potential threats of an illicit discharge, procedures for tracing the source of an illicit discharge, and procedures for eliminating the discharge within specific timeframes.
- Implement an ongoing training program for staff responsible for identification, investigation, termination, cleanup and reporting.
- Track and maintain records of IDDE activities following the Permit-specified format.

6.2 2020 Activities

In 2020, the City maintained ongoing IDDE programs and investigated all reports of potential spills or illicit discharges and inspected for illicit connections during normal catch basin and stormwater facility inspections. These programs included:

- Maintenance of a 24-hour spill reporting hotline, advertised on the City's website.

- Maintaining information and links on the City's website about the hazards of illicit discharges and how to properly dispose of waste.
- Updating Title 13 of the Maple Valley Municipal Code including Chapter 13.40 titled Water Quality that covers illicit discharges and enforcing penalties within the code.
- Performing screening of 45% of the City's MS4 system through catch basin and facility inspections.
- Staff in charge of identifying, tracking, and eliminating illicit discharges and illicit connections took the IC-ID screening and source tracing training and training on the updated 2020 IC-ID Field Screening and Source Tracing Manual.
- Maintaining records of all spills or illicit discharges regardless of who they were reported by, along with the response and any required reporting. These records were kept in electronic files and tracked in an Excel spreadsheet with all of the Permit-specified information. In the 4th quarter of 2020, the IDDE reports and responses began being tracked in the City's new asset management software, Cityworks.
- The City implemented a new app reporting system called SeeClickFix, which allows residents to report all sorts of issues to the City, including dumping, accidents, and other illicit discharges.



Oil Spill Pond Inlet Protection

6.3 2021 Planned Activities

The City's implementation plan for 2021 to achieve the goals and objectives of the IDDE Program includes continuing the activities in the previous section, along with the additional activities described below.

- The City will continue tracking and maintaining records of IDDE activities in the Permit-specified format within Cityworks asset management software and use WQWebIDDE reporting.
- The City will continue to advertise the app SeeClickFix to residents.
- Additional trainings will be held on an as-needed basis for illicit discharges and illicit connections.

7. Controlling Runoff from New Development, Redevelopment, and Construction Sites S.5.C.6

This section describes Permit requirements related to Controlling Runoff from New Development, Redevelopment, and Construction Sites. This element of the Permit is designed to reduce pollutants in stormwater runoff from construction work, whether it be private or public. This section lists the current and continuing programs and activities that met Permit requirements in 2020, and identifies the planned activities recommended for continued compliance with the current Permit in 2021.

7.1 Permit Requirements

Section S5.C.6 of the 2019-2024 Phase II Permit requires the City to:

- Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction sites and adopt minimum requirements, thresholds and definitions in Appendix 1 of the Permit or approved program and amendments.
 - ✓ Adopt this ordinance or program by **June 30, 2022**.
- Review all stormwater site plans for proposed development activities.
- Conduct inspections of construction sites prior to clearing and construction, during construction, and upon completion of construction.
- Provide a link to state stormwater general permit NOI forms for construction and industrial sites.
- Conduct ongoing training for staff responsible for implementing the Program.

7.2 2020 Activities

The City currently has an active program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site activities. The existing program currently applies to both public and private projects, including roads. The current compliance activities associated with this program include:

- Updating Title 13 of the Maple Valley Municipal Code including Chapter 13.20 titled Stormwater Runoff and Surface Water and Erosion Control that covers stormwater development review.
- Reviewing all stormwater plans, including those for public projects and private development, (4 in 2020).
- Conducting all construction inspections as required by the permit (13 sites inspected in 2020). 25 enforcement actions were necessary as a result of inspections.
- Providing appropriate copies of the “Notice of Intent for Construction Activity” and “Notice of Intent for Industrial Activity” to representatives of proposed new development and redevelopment sites.

- One staff member (Construction Inspector) attended a CESCL recertification training and one staff member (Associate Engineer) attended a CESCL certification training.

7.3 2021 Planned Activities

The City's implementation plan for 2021 to achieve the goals and objectives of the Controlling Runoff from New Development, Redevelopment, and Construction Sites Program includes continuing the activities in the previous section, along with evaluating our existing municipal code to determine if future updates are needed to meet all permit requirements by **June 30, 2022**.

8. Operations and Maintenance S5.C.7

This section describes Permit requirements related to Operations and Maintenance (O&M). This element of the Permit is designed to regulate maintenance activities and to conduct maintenance activities to prevent or reduce stormwater impacts. This section lists the current and continuing programs and activities that met Permit requirements in 2020, and identifies the planned activities recommended for continued compliance with the current Permit in 2021.

8.1 Permit Requirements

Section S5.C.7 of the 2019-2024 Phase II Permit requires the City to:

- Implement maintenance standards that are as protective, or more protective, of facility function than those specified in the *Stormwater Management Manual for Western Washington* and develop maintenance standards for facilities that do not have them.
 - ✓ Update maintenance standards as necessary to meet this requirement by **June 30, 2022**.
- When an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed:
 - Within 1 year for typical maintenance of facilities, except catch basins.
 - Within 6 months for catch basins.
 - Within 2 years for maintenance that requires capital construction of less than \$25,000
- Implement a program for maintenance of stormwater facilities regulated by the City by implementing an ordinance that identifies who is responsible for long term maintenance, allows for annual inspections, and establishes enforcement procedures.
 - ✓ **Annually** inspect all stormwater treatment and flow control BMPs/facilities that discharge to the MS4.
 - Maintain records of inspections and enforcement actions.
- Implement a program for maintenance of stormwater facilities owned or operated by the Permittee.
 - ✓ **Annually** inspect all stormwater treatment and flow control BMPs/facilities and take appropriate maintenance.
- Spot check potentially damaged stormwater treatment and flow control BMPs/facilities after major storm events and conduct maintenance and repairs as needed.
- Inspect all catch basins and inlets owned or operated by the Permittee every two years and clean as needed based on maintenance standard.
- Implement and document practices, policies, and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the City and road maintenance activities under the functional control of the City.
- Implement an ongoing training program for employees whose job functions may impact stormwater quality.

- Implement Stormwater Pollution Prevention Plans (SWPPPs) for all heavy equipment maintenance or storage yards and material storage facilities owned or operated by the City.
 - ✓ Update SWPPPs no later than **December 31, 2022** to meet updated requirements.
- Maintain records of inspections, maintenance, repair, and enforcement activities.

8.2 2020 Activities

The City currently has an active O&M program to reduce stormwater impacts. The current compliance activities associated with this program include:

- Using maintenance standards described in the adopted 2016 King County Surface Water Design Manual.
- Continuing to conduct annual inspections of facilities regulated by the City.
 - ✓ In 2020, all sites that have a stormwater treatment and flow control BMP/facility were inspected, and maintenance was requested and followed up on where necessary. All inspections were documented in the City's new Computerized Maintenance Management System (CMMS), Cityworks.
- Continuing to conduct annual inspections of City owned and operated facilities.
 - ✓ In 2020, all City owned stormwater treatment and flow control BMPs/facilities were inspected and maintenance is planned to be completed within required timelines. All inspections and maintenance were documented in the City's new CMMS, Cityworks.
- Continuing to conduct inspections of City-owned or operated catch basins within two-years.
 - ✓ The City inspected 2,125 catch basins in 2020, all of the south Zone 2.
 - ✓ The City cleaned 2,369 catch basins in 2020. This accounts for both the catch basins that required cleaning based on inspection and additional cleanings within Zone 1 as required by Ecology to catch up on incomplete inspections and cleanings in the previous 2-year cycle.
 - ✓ All inspections and maintenance were documented in the City's CMMS, Cityworks.
- Spot checking potentially impacted stormwater treatment and flow control BMPs/facilities after identified large storm events.
- Continuing practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads, or highways owned or maintained by the City. The following activities are addressed:
 - ✓ Ditch maintenance
 - ✓ Cleaning of culverts that convey stormwater in ditch systems
 - ✓ Pipe cleaning
 - ✓ Road repair and resurfacing, including pavement grinding
 - ✓ Snow and ice control
 - ✓ Utility installation
 - ✓ Pavement striping maintenance
 - ✓ Maintaining roadside areas, including vegetation management
 - ✓ Dust control
 - ✓ Application of fertilizer, pesticides, and herbicides, as well as the development of nutrient management and integrated pest management plans

- ✓ Sediment and erosion control
 - ✓ Landscape maintenance and vegetation disposal
 - ✓ Trash management
 - ✓ Building exterior cleaning and maintenance
- Staff attended an ECOSS led training on public and private inspections.
 - Providing training as needed on operation and maintenance standards, inspection procedures, and selecting and installing BMPs.
 - Staff began updating SWPPPs for existing heavy equipment maintenance or storage yards and material storage facilities owned and operated by the City.
 - Maintaining records of all inspections, cleanings, maintenance, and enforcement within the City's CMMS.



Entry Inspection for a Detention Tank

8.3 2021 Planned Activities

The City's implementation plan for 2021 to achieve the goals and objectives of the O&M Program includes continuing the activities in the previous section, along with the additional activities described below.

- Begin evaluating our existing maintenance standards to determine what updates may be necessary by **June 30, 2022**.
- Complete the update of existing SWPPPs.
- Complete inspection of 95% of all City-owned catch basins between **August 1, 2019 and July 31, 2021**.
- Complete all cleaning and maintenance within compliance schedule.



Maintenance of a Pond Outlet Ditch

9. Source Control Program for Existing Development S5.C.8

This section describes Permit requirements related to the Source Control Program for Existing Development. This element of the Permit is designed to prevent and reduce pollutants in runoff from areas that discharge to the MS4. This is a new element added to the 2019-2024 Permit. This section lists the current and continuing programs and activities that met Permit requirements in 2020, and identifies the planned activities recommended for continued compliance with the current Permit in 2021.

9.1 Permit Requirements

Section S5.C.8 of the 2019-2024 Phase II Permit requires the City to:

- Apply operational source control BMPs and structural source control BMPs or treatment BMPs/facilities, if needed to existing sources, inspect and enforce BMP implementation at commercial, industrial, and institutional properties, apply and enforce local ordinances at sites, and implement practices to reduce polluted runoff from pesticide, herbicide, and fertilizer applications.
 - ✓ By **August 1, 2022**, adopt an ordinance requiring the application of source control BMPs for pollutant generating sources.
 - ✓ By **August 1, 2022**, establish an inventory of commercial and industrial properties with pollutant generating potential.
 - ✓ By **January 1, 2023**, implement an inspection program for sites identified in the inventory.
 - Provide sites with information about pollutant generating activities.
 - Annually complete the number of inspections equal to 20% of the businesses and/or properties listed in the inventory and inspect all sites identified through complaints.
 - ✓ By **January 1, 2023**, implement a progressive enforcement policy that includes documented follow-up actions and follow-up inspections.
- Conduct training for staff responsible for implementing the source control program.

9.2 2020 Activities

In 2020, the City took the following steps towards meeting Source Control Program for Existing Development requirements:

- Staff created a preliminary inventory of businesses within the City that have pollutant-generating potential. This inventory is being used for planning purposes to determine how many staff hours would be needed to perform inspections, follow up, and enforcement actions. This will inform whether the City needs to budget for an additional full time position in 2023, add these duties to the duties of an existing or replacement position, or if this function can be served by a contract position.

- The Cityworks CMMS was purchased and configured for the City. Inspection templates will be created in this program and follow up actions can be assigned and tracked as needed.

9.3 2021 Planned Activities

The City's implementation plan for 2021 to achieve the goals and objectives of the Source Control Program includes:

- Beginning to research and write updated source control code language so that it can be presented to the Maple Valley Black Diamond Chamber of Commerce and City Council prior to adoption in 2022.
- Making the final determination on how inspection and enforcement services will be provided (whether in-house or by a contractor).

10. Total Maximum Daily Load Requirements S7

This section provides a brief discussion of the Phase II Permit requirements for total maximum daily load (TMDL).

10.1 Permit Requirements

Section S7 of the 2019-2024 Phase II Permit requires the City to:

- Implement the specific requirements identified in Appendix 2 of the Phase II Permit for applicable TMDLs.
- For applicable TMDLs not in Appendix 2, compliance with the remainder of the Permit shall constitute compliance with those TMDLs.
- For TMDLs that are approved by EPA after this Permit is issue, Ecology may establish TMDL related permit requirements through future permit modification.

10.2 2021 Planned Activities

The City is not currently affected by any TMDLs listed in Appendix 2 of the NPDES Phase II Permit and therefore does not have any planned activities in 2021.

11. Monitoring and Assessment S8

This section provides a brief discussion of the Phase II Permit requirements for Monitoring and Assessment.

11.1 Permit Requirements

Section S8 of the 2019-2024 Phase II Permit requires the City to:

- Notify Ecology in writing which option is selected by the City for regional status and trends monitoring.
 - ✓ Notify Ecology by **December 1, 2019.**
- Notify Ecology in writing which option is selected by the City for effectiveness and source identification studies.
 - ✓ Notify Ecology by **December 1, 2019.**
- Submit records of SWMP activities tracked and/or maintained in response to requests by the Stormwater Action Monitoring Coordinator.

11.2 2020 Activities

In 2020, the City continued to pay into the collective funds for Monitoring and Assessment.

11.3 2021 Planned Activities

In 2021, the City will continue to pay into the collective funds and will provide any necessary data as requested by the Stormwater Action Monitoring Coordinator.

12. Reporting S9

This section provides a brief discussion of the Phase II Permit requirements for Reporting.

12.1 Permit Requirements

Section S9 of the 2019-2024 Phase II Permit requires the City to:

- Submit an annual report to Ecology
 - ✓ Due **March 31st** of each year.
- Keep all records related to the NPDES Phase II Permit and the SWMP for at least 5 years
- Make records related to the NPDES Phase II Permit and the SWMP available to the public at reasonable times during business hours.

12.2 2020 Activities

The City submitted our 2019 annual report prior to March 31, 2020 and continued to keep thorough records of all NPDES Phase II Permit and SWMP activities.

12.3 2021 Planned Activities

The City will submit our 2010 annual report prior to March 31, 2020 and continue to keep thorough records of all NPDES Phase II Permit and SWMP activities.